

Amendment C
U.S. appl. no. 10/579,954

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REMARKS

Claims 1-3, 21-25 and 36-47 are pending in this application.¹ Claims 9-10 and 26-35 were canceled in a previous amendment.

Claims 24-25 have been amended and claims 36-47 have been added. Support for these amended and new claims can be found at, for example, line 12 of page 4 through line 3 of page 5 as well as lines 4-18 and lines 24-32 of page 6 of the as-filed specification.²

The 6/26 Action rejected claim 25 under 35 U.S.C. § 112, ¶2, as indefinite. While Applicants do not agree with this rejection, the amendment of claim 25 accompanying its change in dependency is believed to have rendered it moot.

The 6/26 Action rejected each of claims 1-3 and 21-25 under 35 U.S.C. § 103(a) as being obvious over U.S. Patent No. 6,258,891 (hereinafter "US'891") in view of either of U.S. Patent Nos. 6,294,624 (hereinafter "US'624") or 5,811,479 (hereinafter "US'479"). Applicants respectfully submit that the 6/26 Action improperly characterizes the teaching of US'891 and, accordingly, a prima facie case of obviousness has not been established.

Paragraphs 9 and 15 of the 6/26 Action read as follows (with "Hoxmeier" equating to US'891):

As to claim 1, Hoxmeier teaches a method of making a polymer where a living polymer is reacted with a cyclic siloxane and to form a living block copolymer which can be functionalized with an amino group (abstract; column 1; lines 29-67; column 2, lines 4-41; column 3, lines 10-65; column 4, lines 20-46). Hoxmeier does not teach that the amino group has an active hydrogen on the amino nitrogen atom.

This mischaracterizes the teaching of US'891 and, accordingly, Applicants must traverse any obviousness rejection based thereon. Specifically, none of the cited portions within the quoted paragraphs of the 6/26 Action – abstract, lines 29-67 of col. 1, lines 4-41 of col. 2, lines 10-65 of col. 3 and lines 20-46 of col. 4 – teach functionalization "with an amino

¹ This results in a total of 20 pending claims, only two of which are independent. Accordingly, no additional claim fees should be due at this time.

² In independent claim 40, the reaction medium is more specifically defined than in claim 1. This is believed to further distinguish the process taught in US'891, which is described as occurring in the molten polymer phase and in the absence of volatile hydrocarbon solvent.

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group.” The only mention of an amino group whatsoever appears to be the mention of certain polar promoters in the third full paragraph of col. 3; however, the ordinarily skilled artisan understands that none of these materials reacts with the polymer and, instead, “facilitate the (polymerization) reaction.”³

Further, the last sentence of the quoted paragraphs note that US’891 “does not teach that the amino group has an active hydrogen on the amino nitrogen atom.” The reason for this is readily apparent: if any of the amino materials did have an active H atom, it would prematurely quench the living polymerization by reacting with the lithium initiator.⁴ Thus, modifying any of the amino materials so that one of the amine N atoms included an active H atom would not lead to the presently claimed process.

Because the teaching of US’891 is not susceptible to the type of modification proposed in paragraph 10 (bridging pp. 3-4 of the 6/26 Action), a prima facie case of obviousness based on US’891 in view of US’624 cannot be established.

For the same reason, the teaching of US’891 is not susceptible to the type of modification proposed in paragraph 16 (top of p. 5 of the 6/26 Action); accordingly, a prima facie case of obviousness based on US’891 in view of US’479 cannot be established.⁵

Similarly, any other secondary reference that teaches the use of primary or secondary amines in rubber compositions also cannot be combined with US’891 in this fashion. In summary, US’891 cannot be modified in the manner proposed in the 6/26 Action without destroying its utility by premature termination of the polymerization process.

For at least the foregoing reasons, Applicants submit that obviousness rejections over US’891 in view of either of US’624 or US’479 should be reconsidered and withdrawn.

³ See the paragraph bridging cols. 3-4 and lines 32-40 of col. 4.

⁴ For additional discussion of this same topic, see the Rule 132 Declaration of David F. Lawson, submitted previously with the Request for Continued Examination.

⁵ Applicants assume that the following portion of the 6/26 Action –

[US’479] teaches functionalizing diene polymers with a cyclic siloxane followed by an amine with hydrogen atoms attached to the nitrogen atom ... –

is not an allegation that US’479 teaches that the amine-containing organosilane reacts with, i.e., becomes bonded to, the living polymer chain. An anticipation rejection based on such a faulty reading of US’479 was withdrawn, presumably as a result of the Rule 132 Declaration mentioned in fn. 4 *supra*; see the paragraph bridging pp. 5-6 of the 6/26 Action.

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Questions concerning this submission should be directed to the undersigned. The correspondence address of record remains unchanged.

Respectfully submitted,



David G. Burleson
Registration No. 38,090
Attorney for Applicants

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ZOLLINGER & BURLESON LTD.
Post Office Box 2368
Canton, Ohio 44720-0368

phone: 330 / 526-0104, x2
facsimile: 866 / 311-9964